



# WORKSHOPS 2009

June 11-12

## **WS 17: Glass tempering process (level 2): Glass factory profitability and tempering technology know-how**

**Presenters: Tarmo Pesonen & Miika Äppelqvist, Glaston Finland Oy; Francis Serruys, Saint-Gobain Glass Solutions**

### **Course Summary**

Everchanging business environment offers glass processing plants new business opportunities constantly. This course aims to give participants a view to recent developments in glass markets in terms of glass types and sizes and also coatings. Also new market opportunities, such as solar business, are discussed during the course.

Course covers profitability of glass processing plant and offers a discussion forum to discuss how to increase glass processing plant's productivity from both, technical and commercial, point of views. Technical know-how is strengthened with in depth information about tempering process and tempering quality factors.

Course is targeted to plant directors and managers who wish to gain knowledge of recent developments and discuss the operations development of glass processing plant from both technical and commercial point of views. Recommended glass industry experience is minimum three years.

### **Bullet Point Summary**

- Flat glass tempering
- Profitability of glass factory
- Development in coating markets and the effect on tempering
- Jumbo glass size tempering
- Solving quality problems in tempering
- Solar tempering technologies
- Discussion forum

**glaston**  
seeing it through

### **Course timetable - Friday 12.6.2009**

- 8.30 Profitability of glass processing plant  
9.30 Tempering process:  
- Heat transfer  
- Different factors affecting the tempering quality  
10.30 Coffee/tea  
10.50 Latest trends in glass processing  
- New architectural products used in the project market  
- Large sizes: thin and thick glass tempering, case approach

- 12.30 Lunch  
13.30 Open discussion panel for commercial and technical experiences  
15.00 End of Workshop

**WORKSHOP LOCATION:  
UNIVERSITY OF TAMPERE, PINNI B  
KANSLERINRINNE 1**

**Registration for Workshops at [www.gpd.fi](http://www.gpd.fi)**



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## THURSDAY 11 June

### **Structural Properties of Laminated Glass**

Presenters: S. J. Bennison & I. Stelzer,  
E.I. DuPont de Nemours & Co. Inc

### **Milestones to better understand the Flat Glass Business (history - today - tomorrow)**

Presenter: B. Savaëte, BJS. Différences

### **Industrial Glass Coating Technologies and systems powered by nanotechnology (Beneq)**

Presenter: M. Saikkonen, Beneq Oy

### **Glass Tempering Process (level1): Fundamental steps in tempering and machine test runs**

Presenters: V-J. Kuusiniemi & T. Pesonen & M. Äppelqvist & S. Suominen, Glaston Finland Oy

### **Glass Bending & Tempering process: Theory and machine test runs**

Presenters: V-J. Kuusiniemi & T. Pesonen & M. Äppelqvist & S. Suominen, Glaston Finland Oy

### **Laminating of Heat treated and other speciality glass**

Presenters: M.P. Verleyen, Solutia Europe; M. Rantanen & J. Ala-Savikola, Glaston Finland Oy; R. Giovannini, Glaston Italy; A. Uusikartano, Suomen Turvalasi Tambest; C. Bostick, Consulting Architects; J. Gilleeney, Independent Glass

### **Glass processing basics for Solar industry specialists**

Presenters: R. Nieminen, Glaston America Inc.; I. Hiekkanen & T. Pesonen, Glaston Finland Oy

### **Understanding glass strength, stress analysis and design methodologies for architectural glass**

Presenter: Dr. L. Jacob, Jacob & Associates Pty Ltd.

## FRIDAY 12 June

### **Cutting, Grinding, Washing: Three fundamental steps in Float Glass Processing**

Presenters: P. Pokoern, Bohle AG; M. Emonds, ACW

### **Coated Glass - Applications and markets**

Presenter: S. Nadel, Applied Materials

### **Seeing Through Glass Design**

Presenter: C. Bostick, Consulting Architects

### **Basics of Glass Coating Processes and Coated Glass**

Presenters: P. Vuoristo & T. Mäntylä,  
Tampere University of Technology

### **Digital Printing on Glass**

Presenters: Y. Ninoy & T. Salenius, DIP Tech Ltd.

### **Glass Tempering Process (level2): Glass Factory profitability and tempering technology know-how**

Presenters: V-J. Kuusiniemi & T. Pesonen & M. Äppelqvist, Glaston Finland Oy; F. Serruys, Saint-Gobain Glass Solutions

### **Profitability of a Glass Processing Factory**

Presenter: K. Heikkilä, Glaston Singapore

### **Solar Power - Opportunities for the glass industry**

Presenters: R. Nieminen, Glaston America Inc.; I. Hiekkanen, Glaston Finland Oy; M. Rajala, Beneq Oy; A. Karpinski, Kuraray Europe GmbH; O. Mal, AGC Flat Glass; B. Szyszka, Fraunhofer IST; S. Byers, Ritec International Ltd.; V. Geyer, Scheuten Solar; G. Strij-Hipp, BSW Solar

### **New trends in the Infrared Non-contact Temperature Measurement for the glass industries**

Presenters: R. Gärtner & E. Drews, Raytek GmbH

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